REMARKS

This is in response to the Office Action mailed November 13, 2002 for the above-captioned application. Applicants request a three months extension of time and enclose the appropriate fee. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 15-0610.

Reconsideration and further examination are respectfully requested.

Applicants have amended the title in accordance with the Examiner's suggestion.

The Examiner rejected claims 22-27 and 32-36 under 35 USC § 112, second paragraph, stating that there is insufficient antecedent basis for the terms "carbon" and "the metal" appearing in these claims. Applicants have amended the claims to address this rejection and to eliminate other usages which might be objectionable under US practice.

The Examiner rejected claims 18-21 and 24-26 under 35 USC § 102(b) as anticipated by Haas et al. (US 4,407,849). In treating these claims as anticipated, the Examiner has stated that recitations of the method of forming the device are not germane to the issue of patentability of the device itself, and that these limitations have been given no weight. Applicants respectfully submit that this is in error in the instant case.

Recitations of the method of making a product are relevant, and are afforded patentable weight, when the product is different from that in the art as a result of the differences in the method of making. The Examiner appears to have simply assumed that the products as claimed and the product in the Haas patent are identical. Applicants respectfully submit that this assumption is in error.

In the Haas patent, the carbon coating is formed by spraying colloidal graphite (a suspension of graphite in alcohol and water) to give a coating, and the subjecting the electrodes to a rapid sequences of current spikes to improve adhesion. Such current spiking (or the first application of an electrical discharge following this type of deposition in the course of use) will result in spreading of carbon inside the electrode housing, which leads to undesirable characteristics, namely uneven discharge voltage and current distributions. In contrast, devices formed in accordance with the invention results in a superior coating layer which is not subject to this defect and therefore provides a superior product which can be mass produced with high and

uniform quality. Accordingly, the claimed invention is not anticipated by the Haas reference, and this rejection should be withdrawn.

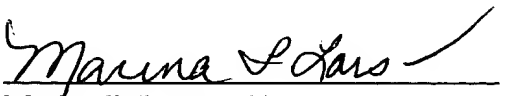
Applicants further note that the Examiner's characterization of the deposition method as claimed as being equivalent to what s known in the art, establishes that the present invention cannot be deemed obvious over the art because such equivalence is not in fact the case. Thus, the obviousness rejections based on Haas alone should be withdrawn.

In connection with claims 22-23, 30-31 and 33-34, the Examiner has also relied on a combination of Haas and Culberston (US 3,604,970). The Examiner states that Haas does not disclose a coating of carbon and metal. To remedy this deficiency, he cites Culbertson, stating that it would have been obvious "to include metal with the carbon to form a chemically inert surface on the electrode, since this will provide better adhesion of the coating."

Applicants note, however, that the device of Culbertson is not a gas discharge tube, as in the claimed invention and as in the Haas reference with which the Examiner seeks to combine it. The purpose of the coating in Culbertson is to reduce electron emissivity from a molybdenum, tungsten, tantalum or copper wire electrode. The Examiner has apparently equated all electrodes, but has not explained why this is warranted. Furthermore, the Examiner has taken a statement that the carbon layer is tightly adherent, and extrapolated from this that the presence of the metal in the Culbertson carbon layer enhances this adhesion. This extrapolation is not warranted by the teaching of the reference. The purpose of the intermediate layer is to serve as a primary means of blocking electron emission from the underlying wire. Absent a showing that such emission is an issue in the Haas, there is no reason to take this feature from Culbertson absent the guidance of the present application.

For the foregoing reasons, Applicants submit that the claims of this application, as amended are in form for allowance. Favorable reconsideration of the application is respectfully requested.

Respectfully Submitted,



Marina T. Larson, Ph.D
Attorney/Agent for Applicant(s)
Reg. No. 32038
(970) 468 6600

Commissioner for Patents
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450